REMARKS

In the Office Action dated January 2, 1992, the Examiner objected to the specification and certain claims under 35 U.S.C. §112, first paragraph; rejected Claims 1-25 under 35 U.S.C. §112, second paragraph; and rejected Claims 1-25 under 35 U.S.C. §103 as being unpatentable over Tompkins et al. In this response, Applicant amends Claims 1-5, 7-23, 25 and 26 and cancels Claim 24 without prejudice. In the specification, typographical errors have been corrected on page 16.

Applicant's attorneys would initially like to thank the Examiner for his time and consideration during the telephone interview on March 12, 1992. The foregoing amendments are intended to address the Examiner's concerns in a manner which is believed to overcome those concerns.

The Examiner objected to the specification, and relatedly rejected claims, under 35 U.S.C. §112, first paragraph for "failing to provide an adequate disclosure" and stated that certain terms were non-enabled. Applicant respectfully traverses such objection and rejection and submits that the subject matter is adequately disclosed in the specification and would be understood by and enabling to those of ordinary skill in the art. In any case, in order to facilitate prosecution of the case, Applicant has amended the claims to obviate the rejection.

The Examiner also rejected Claims 1-25 under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant again respectfully disagrees and submits that the claim language is sufficiently definite and that the terms in question are adequately defined and supported in the specification. However, to facilitate prosecution in accordance with the telephone interview of March 12, 1992, Applicant has amended the claims to obviate this rejection. Also pursuant to the telephone

conversation, the term "non-dedicated", used in the specification consistent with use in the art, remains in the claims. The term "substantially simultaneously" has been changed to "contemporaneous" which encompasses the possibility of some delay, although preferably not so great as to be perceptible to a user. The foregoing are believed to be consistent with the interview and Applicant respectfully submits that the §112 rejections have been overcome.

Claims 1-29 were also rejected under 35 U.S.C. §103 as being unpatentable over Tompkins et al. As discussed with the Examiner, Applicant respectfully disagrees that Tompkins et al. in any way renders obvious the claimed invention.

By way of example, the present invention permits a group of two or more people, each with a personal computer and situated in diverse locations, to provide input regarding edits to be made to a file or document resident in the computer used by one of the group, allow each person in the group to view the file, and allow each to receive and view edits to the file without the transfer of the entire file. Conventionally, collaboration to edit a file has been accomplished by mail, telephone and/or facsimile. More recently, computer disks have been distributed by mail allowing a person to edit a file and then send an updated disk to other people at remote locations. Even more recently, files can be sent electronically between computers for editing, one at a time, by members of a group. Disadvantages of such methods are addressed in the background section of the present application and include the lack of timeliness, inconvenience, uncertain or inconsistent quality (such as in the case of facsimile transmission), and possible confusion as to which file being circulated is the current version. No known methods or means for collaboration have allowed each member of a collaborative group to view a file or document, provide input

regarding editing to such file, and view edits as they are made. The present invention does.

In particular, Claim 1 is directed toward an interactive editing system for a plurality of users at respective remote locations for permitting any of the users to edit a file to be edited. The system comprises a plurality of personal computers, one for each of the users, and at least one of the personal computers (the "host" computer) has multi-tasking processing means for coordinating the execution of file editing operations input of the users by the host computer and the transfer of data corresponding with the file editing operations from the host to the remaining computers such that the editing operations and the data transfer are performed in a predetermined manner. The system further includes interconnecting means for electrically interconnecting the host with the remaining personal computers to permit transmission of electrical signals therebetween.

Claim 9 is directed to a system for contemporaneously editing a file by any of a plurality of users, comprising a plurality of personal computers, one for each of the users, and each including means for inputting editing operations and means for displaying data. At least one of the personal computers (the host) has coordinating means and the system further includes interconnecting means for electrically interconnecting the host with the remaining personal computers to permit transmission of electrical signals therebetween, wherein the file can be contemporaneously edited from any of the personal computers and the edits displayed on each display means.

Claim 18 is directed toward a method for contemporaneously editing a file from any of a plurality of personal computers situated at remote locations, at least one of which (the host) has multi-tasking capabilities. The method comprises the steps of electrically interconnecting the host computer with the

remaining personal computers over a communications network, inputting editing instructions into a personal computer, receiving at the host computer the input editing instructions, editing the file in accordance with the instructions, and transferring data corresponding with the file editing instruction from the host computer to the remaining personal computers over the communications network.

Claim 23 is directed toward an interactive editing system for a plurality of users at respective remote locations for permitting any of the users to provide input, by voice communications means, into the editing operations pertaining to a file to be edited and for permitting contemporaneously viewing of the editing by all of the users. The system comprises voice communications means in one to one correspondence with the users for transmitting audio signals representative of any user's voice to each of the remaining users, a personal computer having multi-tasking processing means for use by one of the users to perform the editing instructions input by the users, a plurality of remote terminals, one for use by each of the remaining users and each having a display, and interconnecting means for electrically interconnecting the personal computer with the remote terminals to permit transmission of electrical signals therebetween.

By virtue of the claimed novel combination of elements, the present invention is exceedingly flexible and can take advantage of readily available hardware, software and communications networks to provide a system by which users at remote locations can interactively edit a document or file without the previously discussed disadvantages of prior methods. Moreover, changes made to the file can be viewed by the users contemporaneously as the changes are made with little or no delay being perceptible to a user.

The §103 rejection of the claims was based on Tompkins et al., apparently in view of ordinary skill in the art. However, Tompkins et al. do not disclose or suggest a system which allows users of personal computers or terminals at remote locations to interactively edit a file. More specifically, Tompkins et al. do not disclose or suggest the use of personal computers or terminals in various remote locations interconnected to permit the users to provide input regarding edits to be made to a file, allow the users to view the file and allow them to receive and view edits without the transfer of the entire file. Tompkins et al. do not even disclose or suggest the use of personal computers or of multi-tasking or coordinating means. Moreover, Tompkins et al. do not even disclose or suggest editing a file, much less transferring data corresponding with the file editing operation from a personal computer having multi-tasking means. With respect to specific embodiments of the present invention, Tompkins et al. do not disclose or suggest the ability of any member of a collaborative group to input editing operations into a personal computer and do not disclose or suggest the ability of any member of a collaborative group to provide voice input of editing instructions. Furthermore, Tompkins et al. do not disclose or suggest an interconnect network comprising a non-dedicated digital communications systems interconnecting the host with the remaining personal computers or remote terminals; do not disclose or suggest an interconnect network comprising an ISDN; do not disclose or suggest any communications network other than a local or intra-facility coaxial network, such as a local area network (LAN); and do not disclose or suggest any means for polling the personal computers or remote terminals to receive editing operations input by the users.

Rather, the system of Tompkins et al. is directed toward a full motion, color video conferencing network in which a

plurality of video terminals are connected to a centralized controller by way of a dedicated coaxial cable, such as an existing LAN. Without analyzing every aspect of Tompkins et al. in detail, Applicant would like to clarify certain aspects of the Tompkins et al. system. As previously noted, the communications network which interconnects each remote unit with the central controller is a single coaxial cable and is, preferentially, part of an existing LAN. As is known in the art, and as set forth in Tompkins et al., a LAN is geographically limited. Consequently, the system of Tompkins et al. is said to be restricted to local or intra-facility conferencing. Such an arrangement, together with the specialized and complicated hardware required, does not permit the flexibility achieved in the present invention in which the personal computers and/or remote terminals can be interconnected through a variety of communications networks, including a non-dedicated digital network, a conventional analog network, or an ISDN.

Furthermore, the specialized and dedicated nature of the hardware required for the Tompkins et al. system (including a color video camera and screen, a microphone and speaker, and circuitry to keep separate audio, video and data signals from each other and from conventional data on the LAN) does not permit the efficiency and economics of the present invention which can make use of a variety of communications networks and employ inexpensive and commonly available hardware and software which can be used for other tasks after an interactive editing session has ended.

It must also be emphasized that the data which is sent over the network of Tompkins et al. only pertains to the configuration of the remote video terminals and is used by the central controller to configure a switching network to provide

appropriate audio and video paths (see, for example, column 2, line 61 - column 3, line 15 and column 21, lines 57-61). Furthermore, the keypad which is associated with each remote unit is employed to initiate operational functions, such as displaying the video on one screen or another or switching the video input between video ports (such as between a video camera and a VCR). There is no disclosure or suggestion that the keypad can be used to enter editing instructions pertaining to a file, much less pertaining to a file resident on a personal computer.

Applicant respectfully submits that, in addition to not disclosing or suggesting elements of the present invention, there is no suggestion in Tompkins et al. to make the claimed combination and the teaching of Tompkins et al. cannot be combined to obtain the present invention and achieve the advantages and flexibility provided thereby. Tompkins et al. doesn't address, much less solve, the problem of how people at remote locations can interactively provide edit input and view the changes as they are made. And Tompkins et al. clearly does not suggest the solution presented by the claimed invention. Rather, Tompkins et al. is directed toward an entirely different problem: how to interconnect users of a LAN to provide audio/video conferencing with full motion, color video, but without the use of a digital network. Moreover, the solution disclosed by Tompkins et al. (multiplexing audio and video signals onto an existing, conventional, dedicated LAN network) actually teaches away from the flexibility of the present invention which, preferably, employs a non-dedicated digital network but which also can take advantage of other communications networks, such as conventional analog networks and ISDN.

Moreover, the Examiner has cited no references and provided no support to show how (or even why) one of ordinary skill in the art would look at Tompkins et al. to arrive at the claimed solution to the present problem. Applicant believes that no such references or support can be found. There have been no references cited which address the deficiencies of Tompkins et al. and those deficiencies cannot be filled by ordinary skill in the art. Consequently, Applicant respectfully submits that the claims, as presented, are not rendered obvious by Tompkins et al. in view of ordinary skill in the art or otherwise and are allowable.

Pursuant to the Examiner's request, an updated Power of Attorney is being filed with this Response. A request for a one-month extension of time, along with the required extension fee, is also being filed with this Response. No other fees are believed owing; however, Applicant's attorneys hereby authorize the Patent Office to debit any underpayment and credit any overpayment to Deposit Account NO. 19-1970. Applicant's attorneys also invite the Examiner to contact the undersigned by collect telephone call if the Examiner believes that such contact would facilitate prosecution of this case.

Respectfully submitted,

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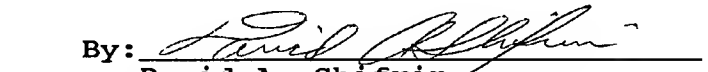
By: 

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